those unacquainted with Russian, not only to transliterate from that language into English, but also to recover the original Russian spelling, and so to trace the words in a dictionary.

RUSSIAN-ENGLISH.

Roman. Capital.	Roman. Small.	Written. Capital.	Written. Small.	English equivalents.	Roman. Capital.	Roman. Small.	Written. Capital.	Written. Small.	English equivalents.
А	а	*А*	*а*	*a*	Ф	ф	*Ф*	*ф*	*f*
Б	б	*Б*	*б*	*b*	Х	х	*Х*	*х*	*kh*
В	в	*В*	*в*	*v*	Ц	ц	*Ц*	*ц*	*tz*
Г	г	*Г*	*г*	*gh*	Ч	ч	*Ч*	*ч*	*ch*
Д	д	*Д*	*д* *д*	*d*	Ш	ш	*Ш*	*ш*	*sh*
Е	е	*Е*	*е*	*e*	Щ	щ	*Щ*	*щ*	*shch*
Ж	ж	*Ж*	*ж*	*zh*	Ъ	ъ	*Ъ*	*ъ*	‘ Not indicated at end of word.
З	з	*З*	*з* *з*	*z*	Ы	ы	*Ы*	*ы*	*ui*
И	и	*И*	*и*	*ī*	Ь	ь	*Ь*	*ь*	‘ Not indicated at end of word.
І	і	*І*	*і*	*i*	Ѣ	ѣ	*Ѣ*	*ѣ*	*ye*
К	к	*К*	*к*	*k*	Э	э	*Э*	*э*	*é*
Л	л	*Л*	*л*	*l*	Ю	ю	*Ю*	*ю*	*yu*
М	м	*М*	*м*	*m*	Я	я	*Я*	*я*	*ya*
Н	н	*Н*	*н*	*n*	Ѳ	ѳ	*Ѳ*	*ѳ*	*th*
О	о	*О*	*о*	*o*	Ѵ	ѵ	*Ѵ*	*ѵ*	*œ*
П	п	*П*	*п*	*p*	Й	й	*Й*	*й.*	*ĭ*
Р	р	*Р*	*р*	*r*					
С	с	*С*	*с*	*s*					
Т	т	*Т*	*т*	*t*					
У	у	*У*	*у*	*u*					

ENGLISH-RUSSIAN.

a	А	*ī*	И	*p*	П	*ui*	Ы
b	Б	*ĭ*	Й	*r*	Р	*v*	В
ch	Ч	*k*	К	*s*	С	*ya*	Я
d	Д	*kh*	Х	*sh*	Ш	*ye*	Ѣ
e	Е	*l*	Л	*shch*	Щ	*yu*	Ю
é	Э	*m*	М	*t*	Т	*z*	З
f	Ф	*n*	Н	*th*	Ѳ	*zh*	Ж
gh	Г	*o*	О	*tz*	Ц	‘	Ъ
i	І	*œ*	Ѵ	*u*	У	‘	Ь

With reference to some of the letters a few words of explanation are necessary.

gh is adopted in preference to *g* for г, since this letter is also the equivalent of *h* in such words as гидра, which, if transliterated *gīdra*, would lose its resemblance to the word *hydra*, with which it is identical.

Although і and и have the same sound, and with a few rare exceptions the letter used in the original may be recognized by a simple rule, it is recommended that the latter should be distinguished by the sign –, since the use of the same English symbol for two Russian characters is objectionable.

The semi-vowels, ъ and ь, must be indicated when present, except at the end of a word, by the sign ‘ placed above the line; otherwise, the transliteration of two Russian characters might give the same sequence as one of the compound equivalents, and it would become difficult to trace the words in a dictionary.

As regards the compound equivalents, nine out of the twelve may be at once recognized, since *h* must always be coupled with the preceding, and *y* with the succeeding, letter.

Where proper names have been Russianized, it is better whenever possible to use them in the original form rather than to re-transliterate them; there is no reason why *Wales* should be rendered *Uel‘s*, or *Wight* written as *Uaīt*. When a Russian name has a more familiar transliterated form, it is advisable to quote this as well as an exact transliteration with a cross reference.

The system will be adopted without delay in the following publications: the Catalogue of the Natural History Museum Library; the Zoological and Geological Records; the publications of the Royal Society, the Linnean, Zoological, and Agricultural Societies, and the Institution of Civil Engineers; the Mineralogical Magazine, and the Annals of Botany; and it is hoped that the system will be generally used.

An expression of grateful thanks is due to those who have assisted in the arrangement of this system by criticisms and suggestions; more especially to Madame de Novikoff and N. W. Tchakowsky.

The undersigned either accept the proposed system in the publications with which they are severally connected, or express their approval of the same:—

W. H. Flower, C.B. ...	*Director, Natural History Museum.*
W. R. Morfill	*Reader in Russian, &c., Oxford.*
F. Löwinson-Lessing ...	*University, St. Petersburg.*
S. H. Scudder	*U.S. Geological Survey.*
W. H. Dall	*Smithsonian Institution.*
B. Daydon Jackson ...	*Bot. Sec., Linnean Society.*
P. L. Sclater	*Zoological Society.*
F. E. Beddard	*Zoological Record.*
W. Topley ... ... C. Davies Sherborn ...	*Geological Record.*
I. Bayley Balfour ... ... S. H. Vines	*Annals of Botany.*
H. A. Miers	*Index to Mineralogical Papers.*
J. T. Naaké.	*British Museum.*
B. B. Woodward	*Natural History Museum Library.*
J. W. Gregory	*Natural History Museum.*

THE BOTANICAL INSTITUTE AND MARINE STATION AT KIEL.

PROF. J. REINKE contributes to the *Botanisches Centralblatt* a very interesting account of the Botanical Institute at Kiel, and of the Marine Station attached to it, as far as they are employed for botanical researches.

The harbour of Kiel is remarkably favourable for the observation of marine Algæ and the investigation of their life-history. In brown seaweeds the immediate neighbourhood is exceedingly rich, being scarcely inferior in the number of species to any other spot on the coasts of Europe. One important order, the Dictyotaceæ, is

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altogether wanting; but another very interesting order, the Tilopterideæ, is well represented. In green Algæ, the large Siphoneæ of the Mediterranean and other warmer seas are represented only by *Bryopsis*. Of red Algæ, the number of species and genera is inferior to that found in the Mediterranean or on the coasts of England and France; but almost all the different types of growth are well represented. Although the Baltic has, like the Mediterranean, no tides, the sea-level of Kiel harbour falls so considerably with a south wind, that many littoral Algæ are then completely exposed.

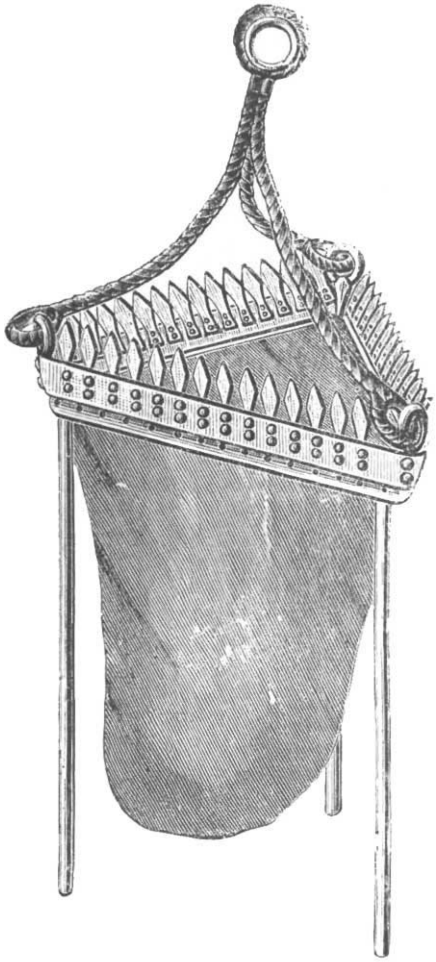
The growing-houses consist of a horse-shoe-shaped block of buildings, on one side of which is a long low house, and of a detached underground house. In designing the plan, the object specially kept in view was to furnish favourable conditions for the cultivation of all the important types of warmer climates; and the houses were therefore not built higher than seemed absolutely necessary. The chief part of the block consists of a higher and a lower cool-house, a higher and a lower hot-house, and a propagating-house. The higher houses are eight, the lower four metres in height, and the propagating-house still lower. Each of the lower houses is again divided into two, for different temperatures. The warmer division of the lower hot-house contains three basins for the culture of tropical fresh-water plants. The propagating-house is, in the same way, divided into two. The underground house is a long building entirely buried, the glass roof alone projecting above the surface of the ground. The heating is effected by hot-water pipes.

The various study-rooms are devoted partly to morphological and systematic, partly to physiological work. The former comprise a large herbarium in the top story, and four roomy work-rooms on the ground floor, in which are also kept those portions of the herbarium which are required for reference for the work in hand, and the whole of the dried Algæ. The first story is devoted to the residence of the Director. One of the work-rooms is devoted entirely to marine Algæ; each is fitted up with microscopical apparatus, and they are furnished with a very extensive reference-library. The second portion comprises a room with a small chamber opening out of it for chemico-physiological work: a room with stone floor, facing the north, for physico-physiological work; and a dark chamber with a balcony in the top story. Before the balcony a large sandstone slab is let into the wall of the building for the erection of a heliostat. In the basement story is a dynamo-machine.

For the collection of the seaweeds both row-boats and steamers are employed. For scraping the larger species off the rocks, Dr. Reinke has contrived a special drag-net, of which a drawing is appended, furnished with a row of sharp teeth at the mouth.

The culture of seaweeds presents greater difficulties in summer than in winter. They continue to grow in the Baltic at any temperature above zero C.; and, in cultivation, a low temperature is much more favourable to their growth than a high one. In the Institute they continue to fructify through the winter in the cool houses if protected from actual frost, the smaller species going through their complete cycle of development from the germinating spore; but a frequent change of the sea-water, or the addition of nutrient substances, is desirable. In summer the incidence of direct sunlight must be carefully avoided, and the temperature of the air must be kept as low as possible. For this purpose ice-cupboards have been built. Prof. Reinke has contrived a special arrangement for the cultivation of seaweeds in their native habitat. In the harbour near to the Botanic Garden, a wooden buoy is anchored, from which is suspended a wire basket by chains from 3 to 4 metres in length. In this floating aquarium the seaweeds grow exposed to their most favourable natural conditions of currents and variations of temperature in the water during the summer months. Next spring it is proposed to build an aquarium for seaweeds for public exhibition in connection with the Institute.

The Government of Prussia has rendered great assistance in the establishment of the Botanical Institute and Marine Station at Kiel through its Minister for Education. The Director is very anxious that, especially in the department of marine Algæ, the herbarium and library, already so rich, should be rendered still more complete, by the addition of specimens or of treatises published in journals in which it may still be deficient.



SIR ROBERT KANE, LL.D., F.R.S.

SIR ROBERT KANE was born on September 24, 1810, in Dublin. This was the fiftieth year of King George III. and the tenth of the Union. Shortly afterwards his father established chemical works on the North Wall, by the side of the River Liffey, which in time developed into important and well-known sulphuric acid and alkali works. His mother was Ellen Troy, of whose family Dr. Troy, Roman Catholic Archbishop of Dublin, was a member. Sir Robert Kane very early in his life developed a taste for chemical knowledge, and in 1828 his first paper, "On the Existence of Chlorine in the Native Peroxide of Manganese," was published, and followed by a series of contributions on kindred themes. He entered Trinity College, Dublin, in 1829, and pro-

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